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Orthopaedic human skeletal joint demonstration aid

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US4433961 A

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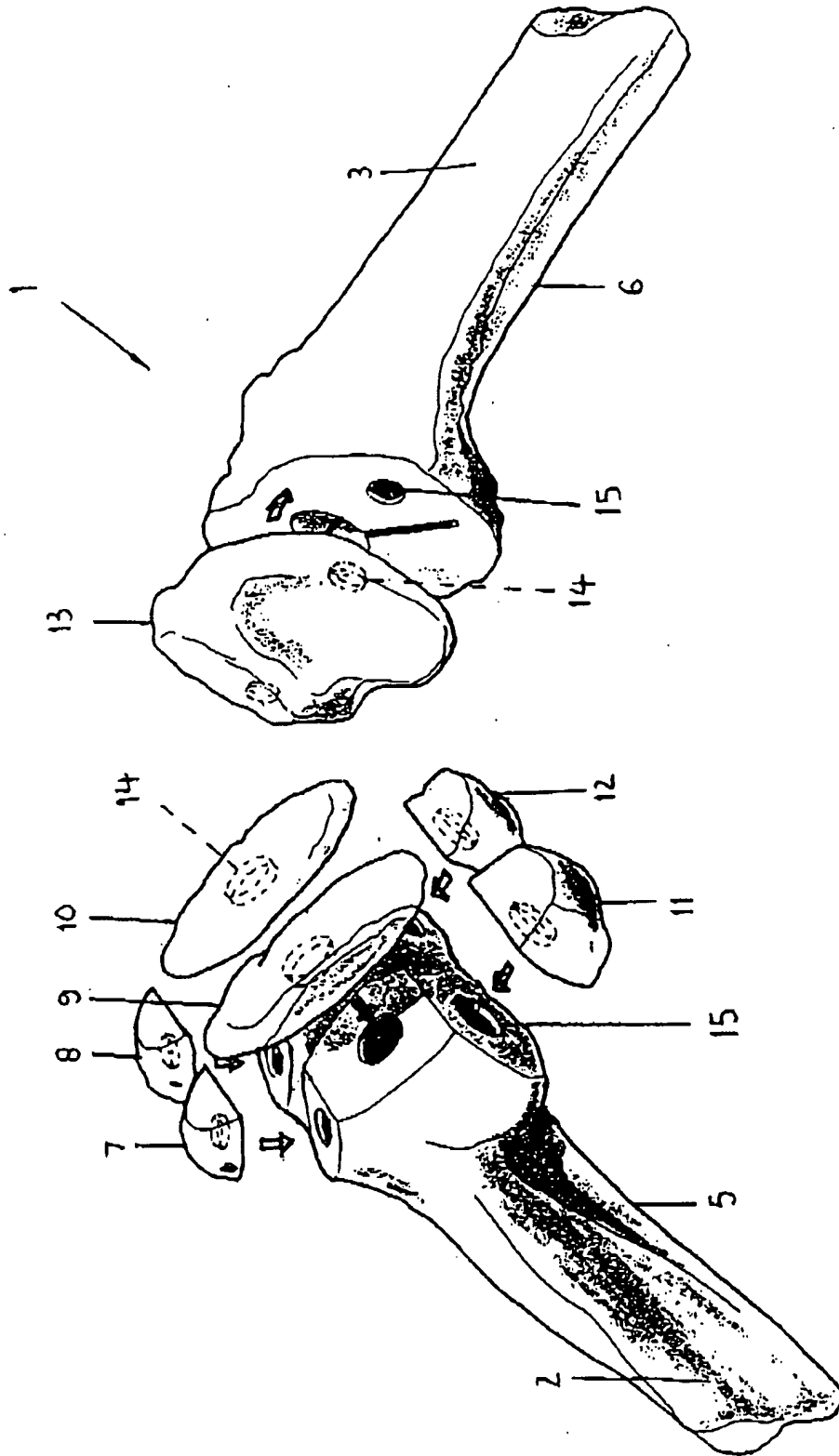


FIGURE 2

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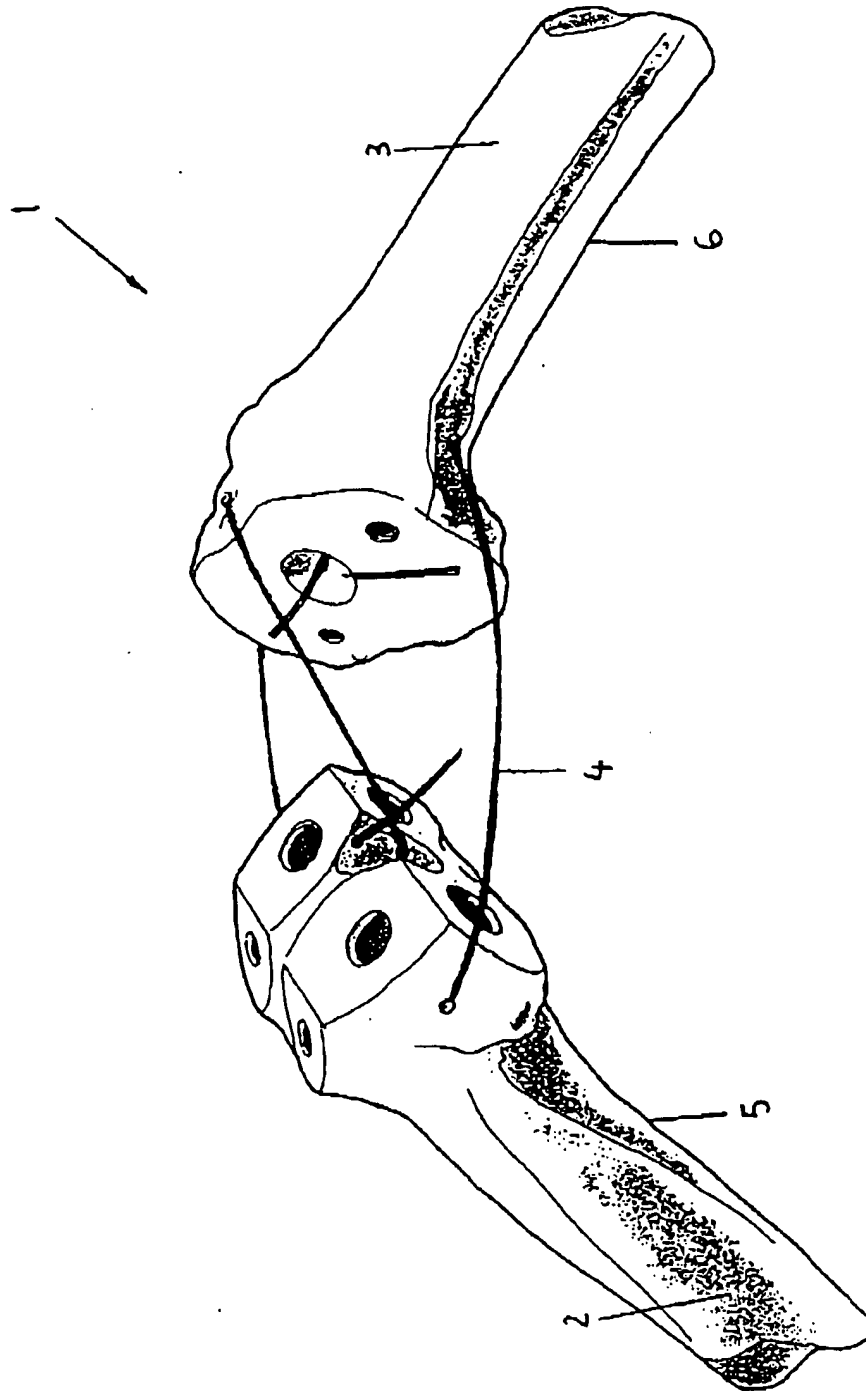


FIGURE 3

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"Orthopaedic Human Skeletal Joint Demonstration Aid"

This invention relates to orthopaedic human skeletal joint demonstration aids.

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In the medical field, it is known to demonstrate surgical techniques using aids specifically provided for this purpose, since it is impractical to rely solely on demonstration of such techniques on the human body. To this end there is a need for an orthopaedic demonstration aid which is capable of showing all stages of human skeletal joint replacement in one demonstration aid. Starting in its natural anatomic form, the same demonstration aid is then able to demonstrate each stage of surgical alteration made to a human skeletal joint by orthopaedic implant techniques up to and including the fitting of an orthopaedic prosthesis to the bone.

10

It is an object of the invention to provide an orthopaedic human skeletal joint demonstration aid which is particularly convenient in use.

15

According to the present invention there is provided an orthopaedic human skeletal joint demonstration aid for demonstrating the fitting of an orthopaedic prosthesis to a human skeletal joint, the aid comprising a facsimile human skeletal part including a main portion and a facsimile joint portion corresponding to a human skeletal bone joint portion requiring replacement by the prosthesis, wherein the facsimile joint portion consists of one or more pieces which are releasably secured to the main portion, which are readily detachable from the main portion to enable the

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four facsimile ligaments 4 in the correct anatomical position. Each of the facsimile femur 2 and tibia 3 comprises a main portion 5 or 6 and one or more detachable pieces 7, 8, 9, 10, 11, 12 or 13 forming facsimile joint portions.

5 Thus the facsimile skeletal knee is made up of a series of different pieces which are anatomically correct to the human skeletal knee in its natural form, when put together in the correct order as shown in Figure 1. As best appreciated by referring to Figure 2, which shows the pieces 7, 8, 9, 10, 11, 12 and 13 detached from the main portions 5 and 6, the pieces are attached to the main portions 5 and
10 6 by the magnetic attraction of magnets 14 and 15 recessed into the pieces and the main portions (the magnets 14 being shown in broken lines in each case).

Each of the detachable pieces 7, 8, 9, 10, 11, 12 and 13 may be separately removed from the main portions 5 and 6 so as to show different stages of the
15 orthopaedic implant technique. Furthermore, with all the pieces removed as shown in Figure 3, the aid 1 can readily accept the correct orthopaedic prosthesis (not shown) for both the femur and the tibia. Once the demonstration of the orthopaedic implant techniques has been completed, the prosthesis can be removed, and the detachable pieces can be reattached so as to place the aid 1 in the state shown in
20 Figure 1 to enable it to be reused.

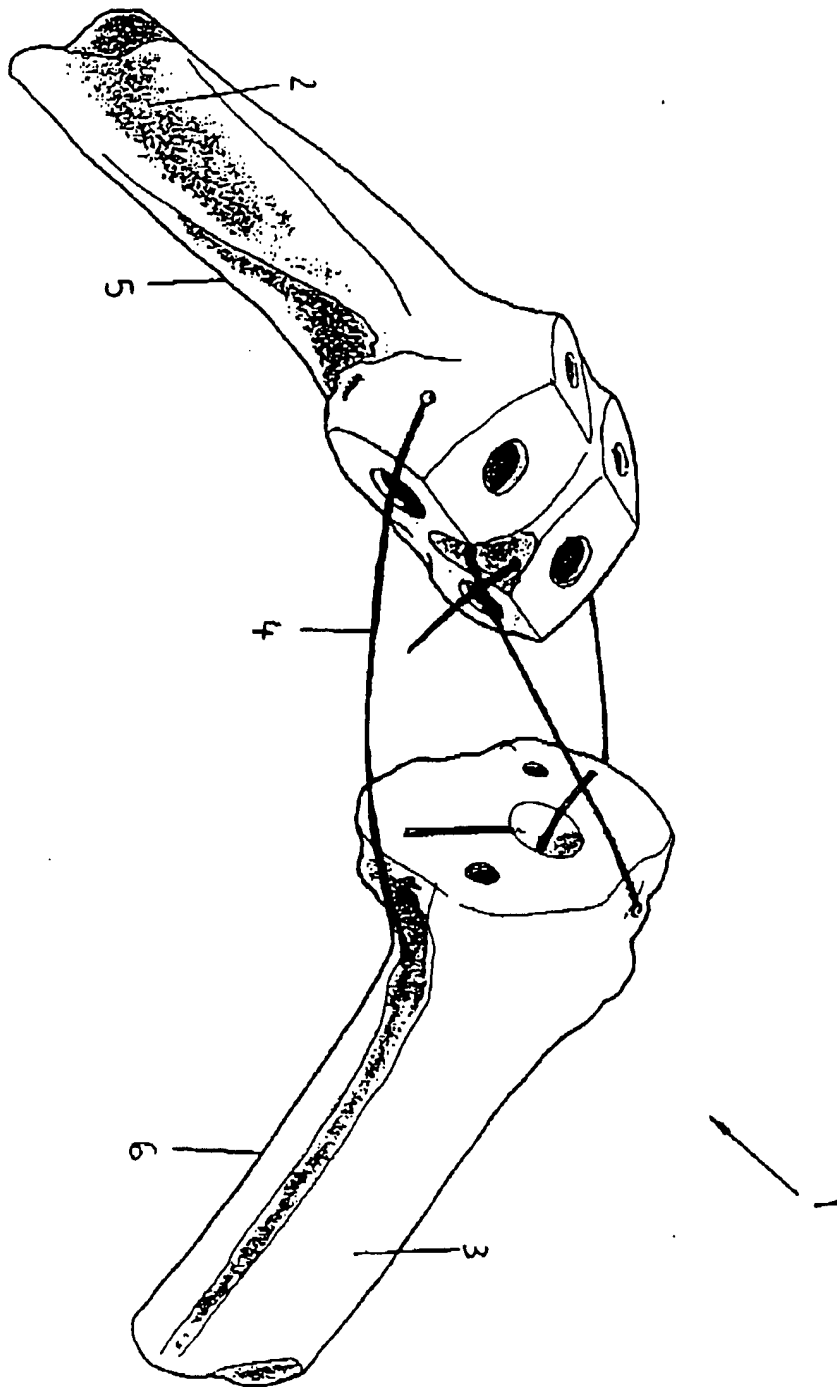
It will be appreciated that the number of detachable pieces required in any particular demonstration aid will be dependent upon the orthopaedic implant technique to be demonstrated. Furthermore various modifications of the above described

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CLAIMS

1. An orthopaedic human skeletal joint demonstration aid for demonstrating the fitting of an orthopaedic prosthesis to a human skeletal joint, the aid comprising
5 a facsimile human skeletal part including a main portion and a facsimile joint portion corresponding to a human skeletal bone joint portion requiring replacement by the prosthesis, wherein the facsimile joint portion consists of one or more pieces which are releasably secured to the main portion, which are readily detachable from the main portion to enable the facsimile joint portion to be replaced by the prosthesis, and
10 which are subsequently reattachable to the main portion to reinstate the facsimile joint portion after removal of the prosthesis.
2. An aid as claimed in Claim 1, wherein the joint portion consists of a plurality of said pieces which are removable sequentially to show different stages of
15 an orthopaedic implant technique.
3. An aid as claimed in Claim 1 or Claim 2, wherein the main portion and the facsimile joint portion together constitute a facsimile of only a portion of a human bone.
20
4. An aid as claimed in any preceding claim, wherein the pieces are secured to the main portion by magnetic attraction.
5. An aid as claimed in Claim 4, wherein the pieces are secured to the main

FIGURE 3



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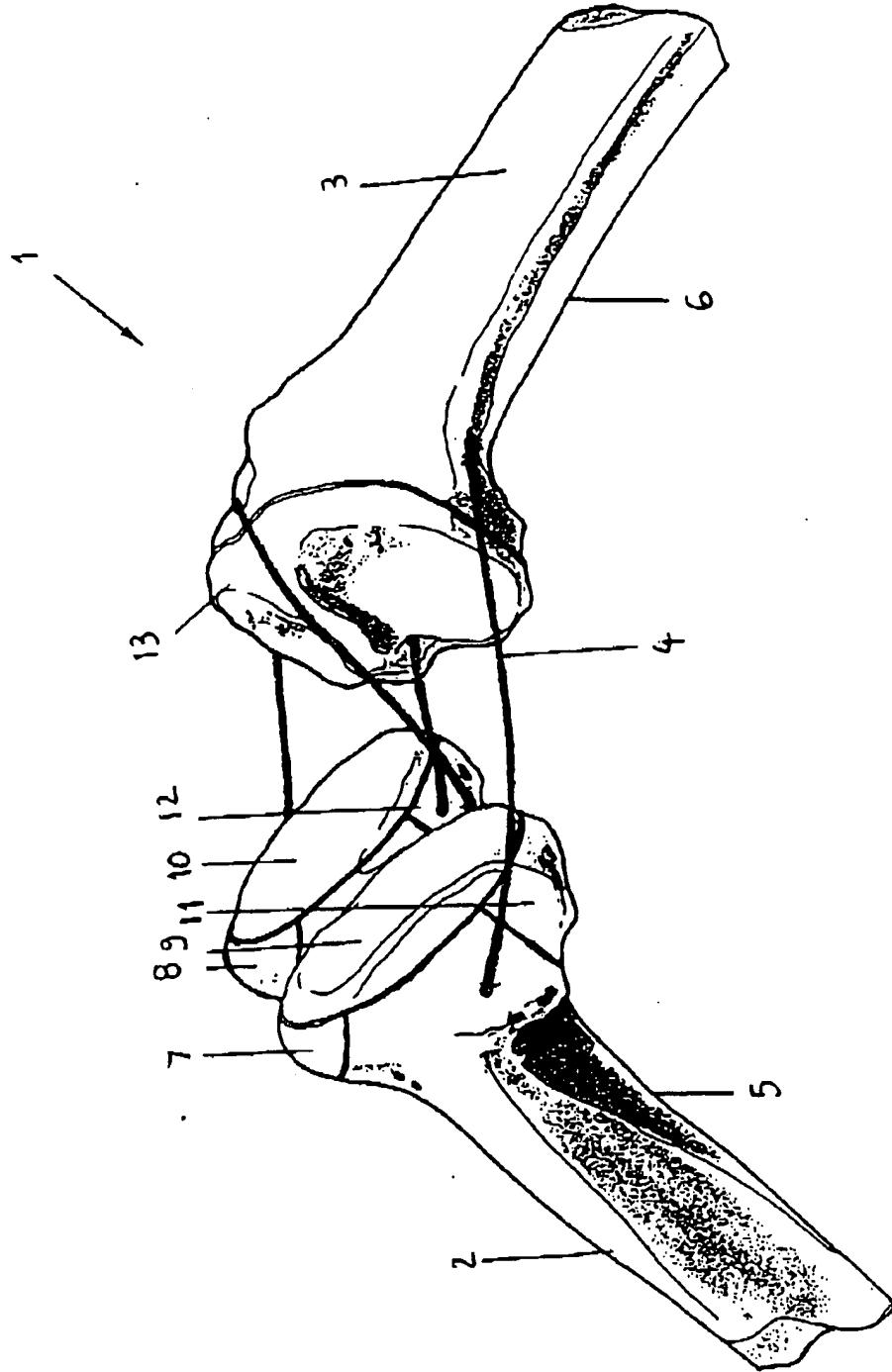


FIGURE 1